

Case Report

A rare case of direct cervical skin involvement from metastatic cervical lymph node in carcinoma of oral cavity

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ABSTRACT

Carcinoma of the oral cavity is becoming more prevalent in India owing to increased betel nut chewing, beedi smoking, consumption of hans, gutka and other tobacco products. In the tumor spread, first it metastasizes to cervical nodes and then to distant sites. We report a rare case of direct skin involvement from metastatic cervical lymphadenopathy. A 60 years old lady came with the complaints of swelling on the left side of the neck since 3 years. She was a betel nut chewer since childhood. On examination, the swelling was tender, firm, fungating with erythema over the swelling. Oral cavity examination showed a 2×3 cm ulcerative growth in the left gingivobuccal sulcus with grade III trismus. CECT scan showed irregular heterogeneously enhancing necrotic mass of size 5.1×4.2×3.7 cm, in the submandibular region showing skin infiltration. There was an irregular heterogeneously enhancing lesion in the left gingivobuccal sulcus. Biopsy from the growth showed features of well-differentiated squamous cell carcinoma. The patient underwent composite resection and left modified radical neck dissection with complete excision of the fungating tumor with tumor-free margins. The defect in the oral cavity and neck was closed with pectoralis major myocutaneous flap and deltopectoral flap. Histopathology showed pT2N3bM0 with stage IVb and patient was advised adjuvant chemo-radiation. In conclusion, cervical skin involvement from cervical metastasis is rare compared to facial skin involvement from the tumor. Patients with N3b nodal staging should be planned in a multidisciplinary setting for a better treatment outcome.

Keywords: Neck, Lymphadenopathy, Metastasis

INTRODUCTION

Oral cancer ranks as the most common among all the cancers in India. In the direct spread of the tumor to adjacent structures, it involves the skin. Skin involvement in oral cancers upstages the tumor and reduces the survival.^{1,2} It is quite often that we encounter the skin involvement from the tumor per se, but it is exceptionally rare to encounter the direct skin involvement from the cervical lymph node metastasis. There are different mechanisms of skin involvement, one among them is direct spread from the extracapsular region of the lymph node.³ We report a case of direct skin involvement from

metastatic cervical lymphadenopathy without the involvement of other major structures in oral cavity primary.

CASE REPORT

A 60 year old lady presented with complaints of swelling in the left side of the neck since 3 years. Initially, the swelling started as pea size and gradually progressed to the present size. She had difficulty in opening the mouth for 2 years. She had a history of betel nut chewing mixed with tobacco since childhood. Neck examination showed a fungating mass of size 6.5×4×3 cm, which was tender,

firm in consistency and with erythema over the swelling (Figure 1). Oral cavity examination showed a 2×3 cm malignant growth in the left gingivobuccal sulcus with grade III trismus. CECT scan showed an irregular heterogeneously enhancing necrotic mass of size 5.1×4.2×3.7 cm, involving the submandibular gland with areas of chunky calcifications and infiltration of skin (Figure 2).



Figure 1: Preoperative picture of the fungating mass.

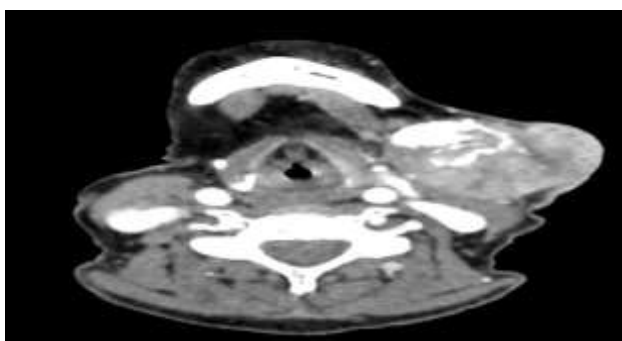


Figure 2: CECT picture of the mass showing chunky calcifications and skin infiltration.

There was an irregular heterogeneously enhancing lesion in the left gingivobuccal sulcus of size 2.4×3.2 cm with anterior cortical destruction of ramus and coronoid process of the mandible. Biopsy from the lesion showed features of well differentiated squamous cell carcinoma. FNAC of the swelling in the neck showed background necrosis and plenty of squamous cells, most of them were mature looking. A few of them showed vesicular with pleomorphic nuclei suggesting differentiated squamous cell carcinoma. The patient was diagnosed as carcinoma left buccal mucosa cT4aN3bM0 with stage IVb. As the patient had a good performance status (KPS-90), composite resection of the tumor and excision of the fungating neck node was performed with left modified radical neck dissection sparing the spinal accessory nerve and internal jugular vein (Figure 3). The intraoral defect was reconstructed with pectoralis major myocutaneous flap and neck defect was closed with deltopectoral flap reconstruction. After 3 weeks the deltopectoral flap was divided and resutured (Figure 4). Histopathology showed well-differentiated squamous cell carcinoma of the left

buccal mucosa, all margins free from tumor, no lymphovascular invasion, 2/18 lymph nodes positive for malignancy (Figure 5). Perineural invasion was present, extracapsular spread was seen in neck node with pathological staging pT2N3b. The patient was subjected to postoperative adjuvant chemoradiation and is in regular follow up since 6 months.



Figure 3: Intraoperative picture after excision of the fungating mass.



Figure 4: 6 weeks postoperative picture.

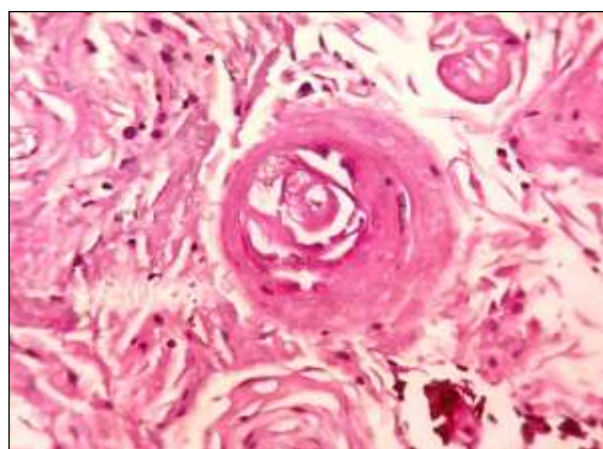


Figure 5: Histopathology picture showing squamous eddies.

DISCUSSION

Skin involvement in the spread of tumor is mainly of 2 types, direct and isolated skin metastasis with intervening normal tissue.⁴ Direct spread from tumor and extracapsular area of lymph node explains the mechanism of direct skin involvement. Spread through intradermal lymphatics, hematogenous spread and following neck dissection (due to bypass of tumor cells from pulmonary filtration) explains the isolated skin metastasis with intervening normal tissue.⁵ Our case is direct spread from extracapsular area of lymph node.

In head and neck tumors, the skin metastasis presents as loss of skin mobility with facial asymmetry, peau d'orange appearance, skin puckering, skin nodules and as a fungating tumor. In our case, skin involvement initially started as skin nodule which progressed to a fungating tumor. In the clinical presentation of skin metastasis, there is a spectrum of changes varying from peau d'orange appearance to skin nodules and in the end as fungating tumor.⁶ Most of the cases which are presenting in the stage of fungation are neglected and socially isolated.⁷

The chance of extracapsular spread from the cervical lymph node is 46%, but the cervical skin involvement from this extra capsular spread is only <0.5%.⁸ Involvement of cervical skin has a poorer prognosis than involvement of the facial skin as the risk of distant metastasis is high.⁸ In most of the cases with N3b lymph node, the involvement of carotid artery, prevertebral fascia or other major structures in the neck are common, but in our case, only skin is involved extensively sparing the major structures.

According to new 8th edition, AJCC staging extra-capsular spread is staged as N3b and stage IVb. As this is a very advanced disease, the treatment is planned with palliative intent. A multidisciplinary team approach is needed in the treatment planning of such advanced tumor.⁷ In our case, after examination and investigation carefully, we planned for complete excision of tumor and the fungating node with curative intent as it is not involving the carotid artery and other major structures in the neck. So all the cases with N3b stage, with fungating tumor should be analyzed preoperatively for the treatment planning. The other treatment modalities include radiotherapy, chemotherapy and chemoradiation.⁹ Cole stated that surgery increased patient survival which was statistically significant. 1 cm of tumor margin is needed for the adequate resection of the tumor from the cervical skin.¹⁰ The resulting skin defect is closed with different techniques; direct closure if the defect is small, regional flaps and free flaps are used for larger defects. In a retrospective study conducted by Dragan et al between 2000-2007, only 8 patients were identified with direct cervical skin involvement from cervical lymphadenopathy.⁷ In this study, only 2 patients had large skin defect which needed a pedicled flap. In our case, as the

presentation was delayed, there was a larger skin defect which was closed with deltopectoral flap and divided after 3 weeks.

CONCLUSION

Cervical skin involvement from cervical metastasis is rare compared to facial skin involvement from tumor. It is extremely rare for lymph nodes with extra-capsular spread to involve only skin without involving major structures of the neck. Patient with N3b nodal staging should be planned in a multidisciplinary setting for the better treatment outcome of the tumor.

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